

# Memorandum



To: Roger Healy Date: 10/23/01

From: Mark Dalton File #: 07072-144

Subject: Ferry Terminal Conceptual Design and Cost Estimates

HDR prepared a conceptual ferry terminal layout for the Gravina Access Project ferry alternatives based on the existing Ketchikan Shuttle Ferry Facility design drawings dated February 1987 and provided by the State of Alaska Department of Transportation and Public Facilities (DOT&PF). The ferry terminal conceptual design was incorporated into the plans for the project's three ferry alternatives: G2 (Ferry from Peninsula Point), G3 (Ferry from Downtown Ketchikan), and G4 (Expanded Existing Ferry).

The preliminary conceptual design for the ferry terminal is presented in the attached plans. Because these plans are preliminary, the terminal dimensions and locations of the parking lots, site access drive, ticket booth, passenger shelters, etc., are approximations only.

The estimated costs of a typical ferry vessel and ferry terminal for 2003 (construction year) are presented in Table 1.

**Table 1: Cost Estimate for a Typical Ferry Vessel and Terminal**

<i>Description</i>	<i>Unit</i>	<i>Unit Cost</i>
Earthworks, surfacing, paving, and drainage	Square meter	\$ 65
Passenger shelter and ticket booth (300 m <sup>2</sup> )	Lump sum	\$ 330,000
Vessel design and build	Lump sum	\$4,320,000
Electrical power connection to ferry terminal	Lump sum	\$ 350,000
Ferry terminal	Lump sum	\$6,000,000

As shown in the table, the unit cost of the terminal's earthworks, surfacing, paving, and drainage would be \$65 per square meter. This value was calculated based on the total unit cost of a typical new roadway section proposed for the project.

The unit cost of the passenger shelter and ticket booth structures would be \$1,100 per square meter; for a 300-square-meter facility, the lump sum cost would be \$330,000. The unit cost was calculated based on the 1997 Building Construction Data for Offices 1 to 4-story, 55<sup>th</sup> Annual Edition, published by RS Means Company, Inc.



## Memorandum

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According to The Glosten Associates, Inc., the lump sum cost of designing and building a typical ferry for the project would be \$4,320,000. This ferry is assumed to be similar to the new Ketchikan Airport Ferry that is currently under construction at the Alaska Ship & Drydock (ASD) facility. If it is decided to construct a vessel identical to the one currently under construction, then the cost would be decreased by approximately \$200,000. This reflects the fact that, because the contract design package is essentially defined, minimal new engineering effort would be required to procure an identical vessel. The cost could also be reduced by about \$100,000 if it is determined not to class the new vessel with the American Bureau of Shipping (ABS).

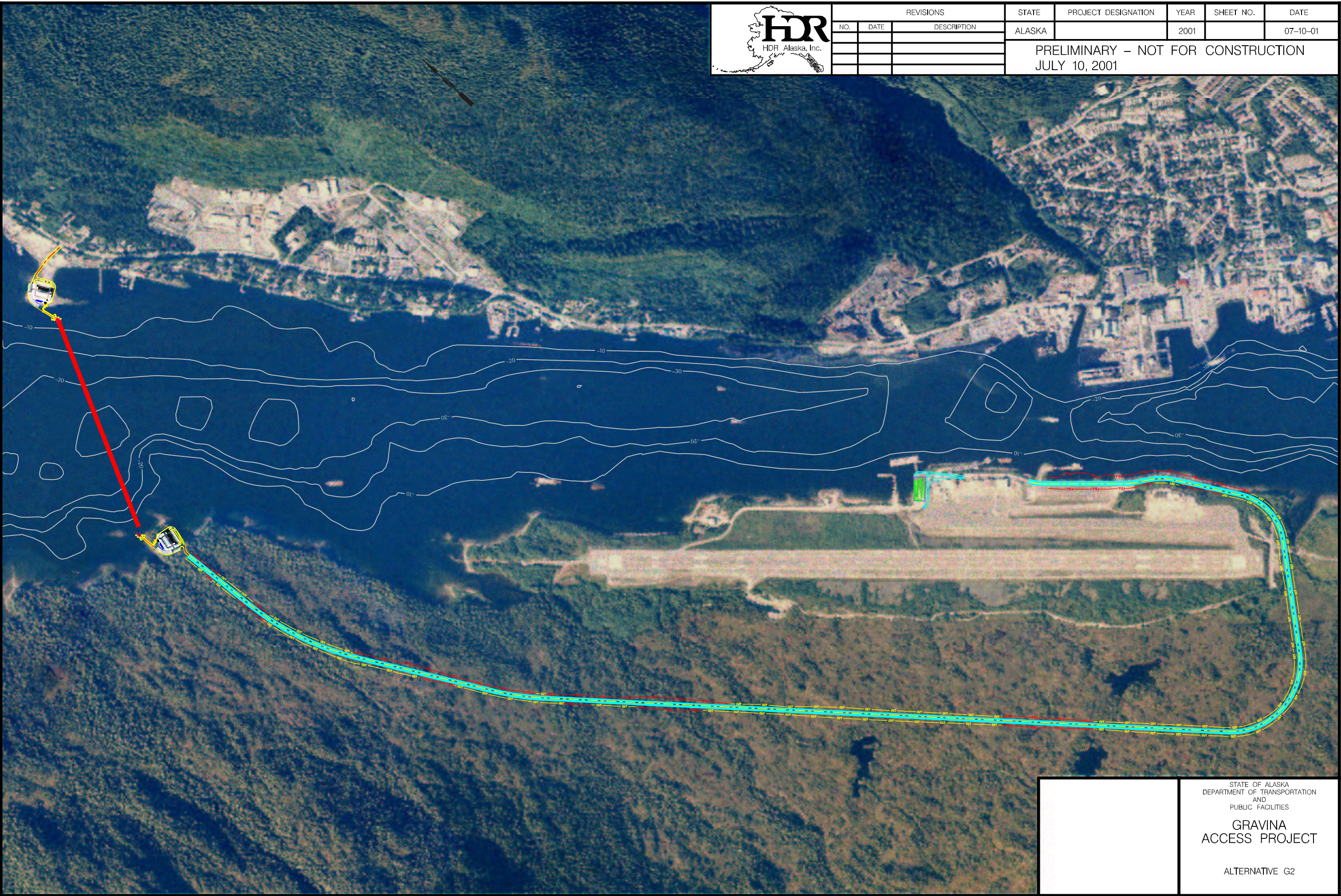
The lump sum costs of the ferry terminal and its electrical connection would be \$6,350,000. This combined cost was taken from the *Increasing Ferry Capacity Between Ketchikan and Gravina Island* Technical Memorandum for the project (March 2000).



REVISIONS		
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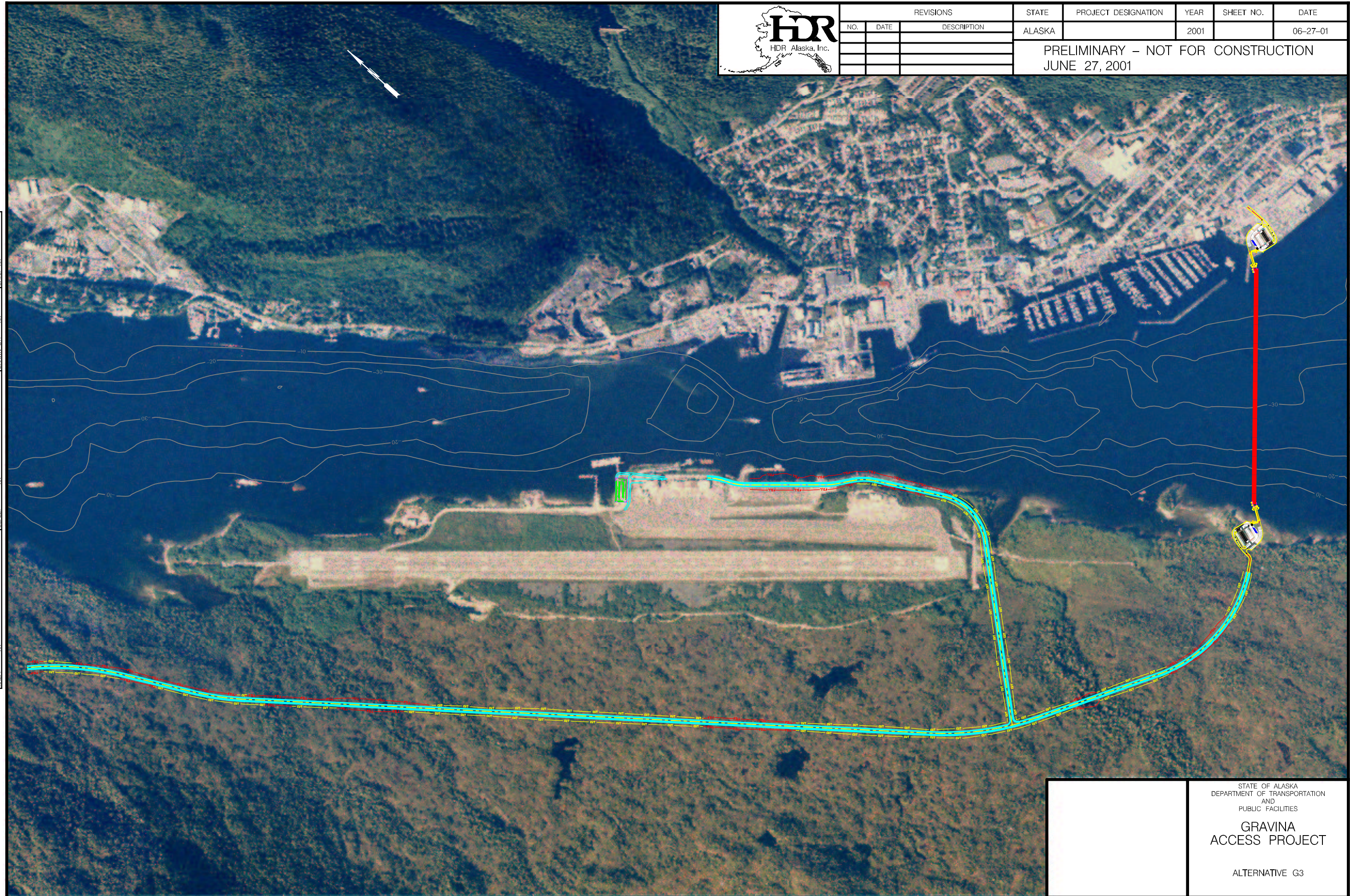


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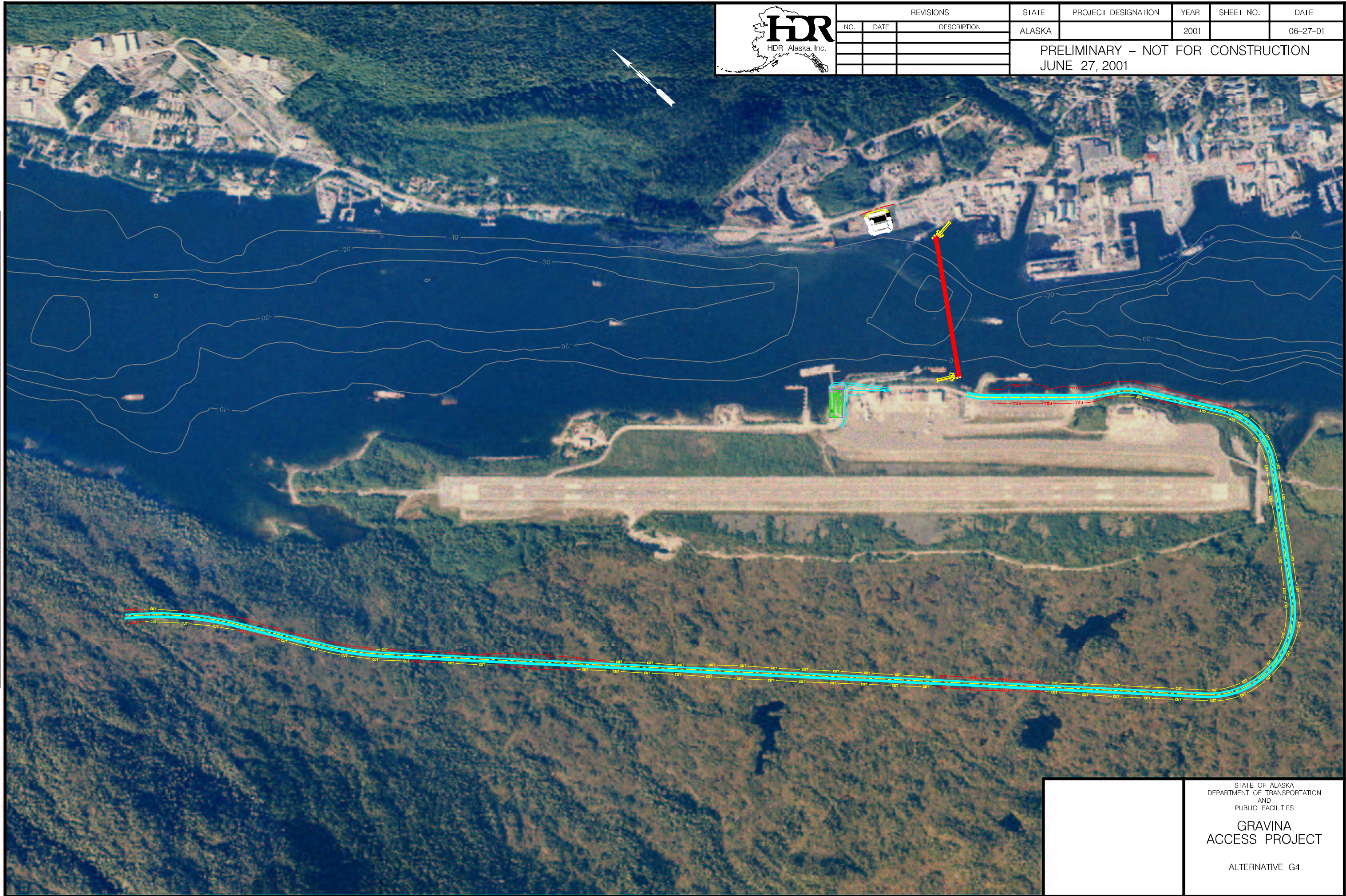
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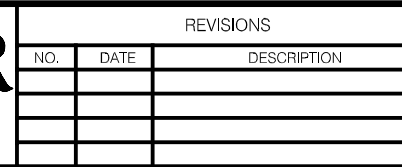
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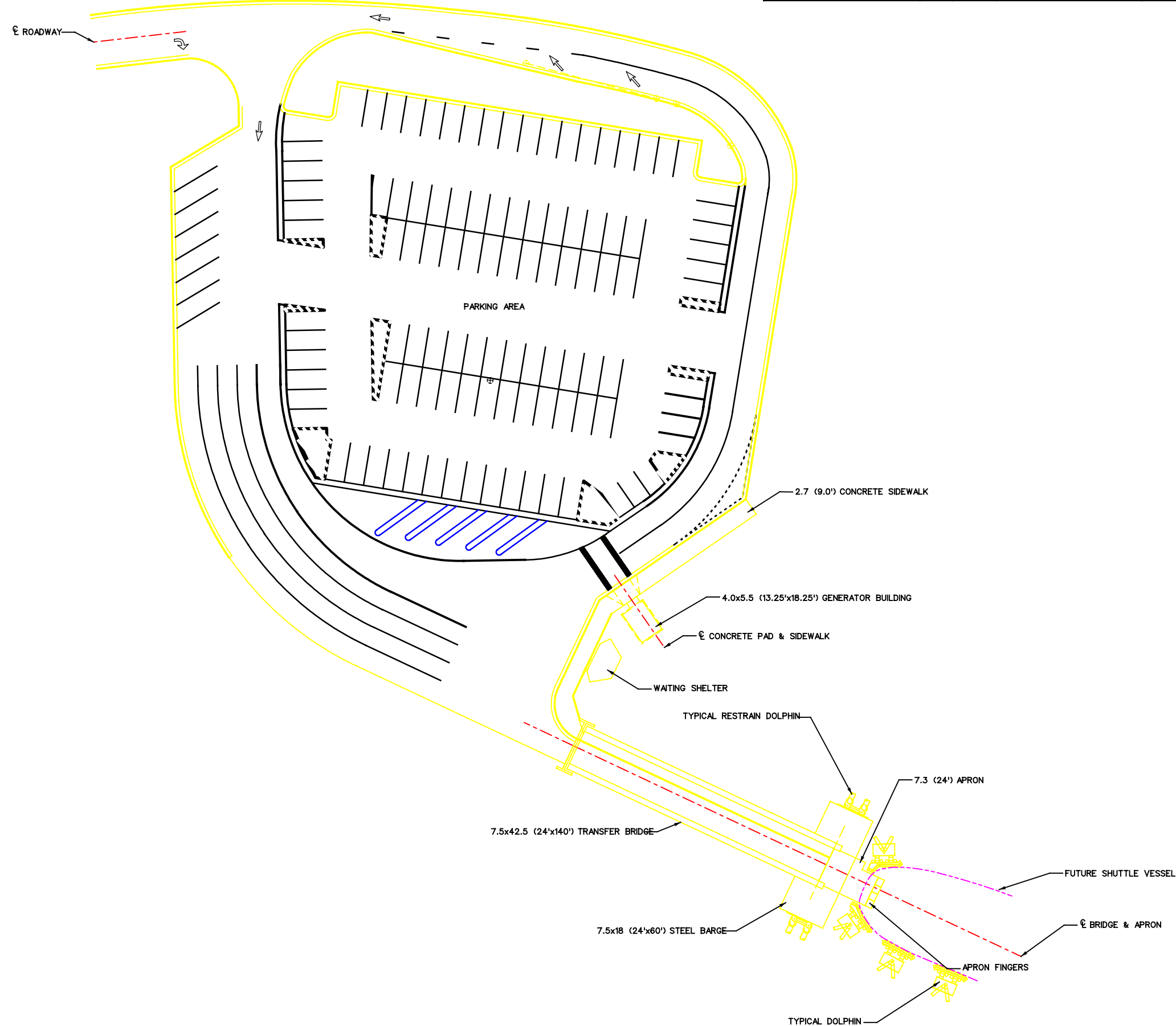
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TYPICAL FERRY TERMINAL LAYOUT